

## **R E M A R K S**

In the Office Action of November 30, 2001, a Requirement for Restriction was made, as well as an Election among Species. A Response to the Requirement was submitted on August 17, 2006. A Notice of Non-Responsive Amendment was then mailed on May 23, 2008, regarding the Response filed.

The recognition that the Response submitted on August 17, 2006, was a *bona fide* attempt to provide a complete reply to the Office Action is noted with sincere appreciation.

Claims 6-18 are in the case. Claims 11-18 have been withdrawn from consideration due to the finality of the Restriction Requirement. Claims 1-5 and 19 had been cancelled previously (in the Continued Prosecution Application filed on September 25, 2001), and were inadvertently included in the Response filed on August 17, 2006.

### **Election of Species**

The election of one species in each of the two following categories has been required:

- 1) The epoxy resins; and
- 2) The curing agents.

It is understood that the claims shall be restricted to the elected species if no generic claim is finally held to be allowable. The Examiner's observation that Claims 6-18 are generic is noted with sincere appreciation.

Applicants hereby elect a diglycidyl ether of a bis-phenol-A mixed with acrylate monomers (*e.g.*, Epon 8161) as the species of 1) and a polyamide (*e.g.*, Epi-Cure 3164) as the species of 2), with traverse. In neither the Office Action of November 30, 2001, in which the election of species was originally set forth, nor in the Action of May 23, 2008, was any allegation made that the generic claims recite such a multiplicity of species that an unduly extensive and burdensome search is necessary. See M.P.E.P. §806.01.

### **Objections to various items**

On Page 3 of the present Office Action, objections are made regarding several items. These items are addressed in the order presented in the Office Action.

Although no §112 rejection is made, it is stated that there is no enablement for the acrylic resins of component a) in Claim 6. Acrylic resins are known in the art, and it is submitted that one of ordinary skill in the art understands what acrylic resins are. The reason for the Examiner's insistence that the claims be directed to a particular acrylic copolymer having CAS<sup>®</sup> registry number 134633-08-2 is not understood.

Amendments have been made to the paragraph bridging Pages 10-11 of the Specification to correct the name of Epon<sup>™</sup> 8161 and to correct spelling errors. Claim 7 part b) as amended recites an ingredient that is an epoxy resin rather than a wetting agent. The paragraph on Page 6 of the Specification has been amended to reflect that Epon<sup>™</sup> 8161 is a polyacrylate epoxy resin, as shown in a product brochure of Hexion Specialty Chemicals (relevant pages attached to this Response as Exhibit A). These amendments are believed to overcome the objections regarding Epon<sup>™</sup> 8161.

Amendments have been made which overcome the objections to the wetting agent, defoamer, thixatrodex, and flow control agent. Claim 7, part b) has been amended to recite "an epoxy resin" rather than "a wetting agent", as the original substance listed in part b) of Claim 7 was Epon<sup>™</sup> 8161, an epoxy resin. In part d) of Claim 7, part d) of Claim 8, and part c) of Claim 9, a polyacrylate copolymer is now recited, rather than any of the terms to which an objection was made. Support for these amendments is found in Claims 7 and 19 as originally filed, where the commercial product Byk<sup>®</sup> 361 is referred to as a polyacrylate copolymer.

The objection to Heloxy 9 is discussed below in connection with the objection to the description of the Epon 8132 resin.

Part b) of Claim 9 has been amended to delete the word "polyetheramine"; this amendment, which is supported at Page 7, line 6 of the Specification, is believed to overcome the objection to the breadth of the curing agent of Claim 9, part b).

Claim 7 has been amended to correct the spelling of the term "diglycidyl" in both a) and b).

Part a) of Claim 7 has been amended to recite "C<sub>12</sub>-C<sub>13</sub> alkyl glycidyl ether" rather

than "monofunctional epoxide of a C12-C13 aliphatic alcohol", for part of the Epon 8132 resin, as the Examiner has suggested. Similarly, Page 6, lines 7-8 of the Specification have been amended to recite "C<sub>12</sub>-C<sub>13</sub> alkyl glycidyl ether" rather than "diluent", for the sake of consistency, as the Examiner has suggested. From this, it is clear that Heloxy™ 9, the diluent, is a C<sub>12</sub>-C<sub>13</sub> alkyl glycidyl ether. In addition, part c) in Claim 7 and part c) in Claim 8 have been amended to recite "C<sub>12</sub>-C<sub>13</sub> alkyl glycidyl ether" rather than "Heloxy 9".

Claim 10, although withdrawn, has been amended to correct spelling errors.

As Applicants do not have any information regarding the correlation of CAS® registry numbers with the particular substances described in the present case, changes suggested by the Examiner to insert such information have not been made.

In light of the foregoing remarks, the case is believed to be in condition for allowance. Prompt notification to this effect would be sincerely appreciated.

If any matters remain that require further consideration, the Examiner is requested to telephone the undersigned at the number given below so that such matters may be discussed, and if possible, promptly resolved.

Respectfully submitted,

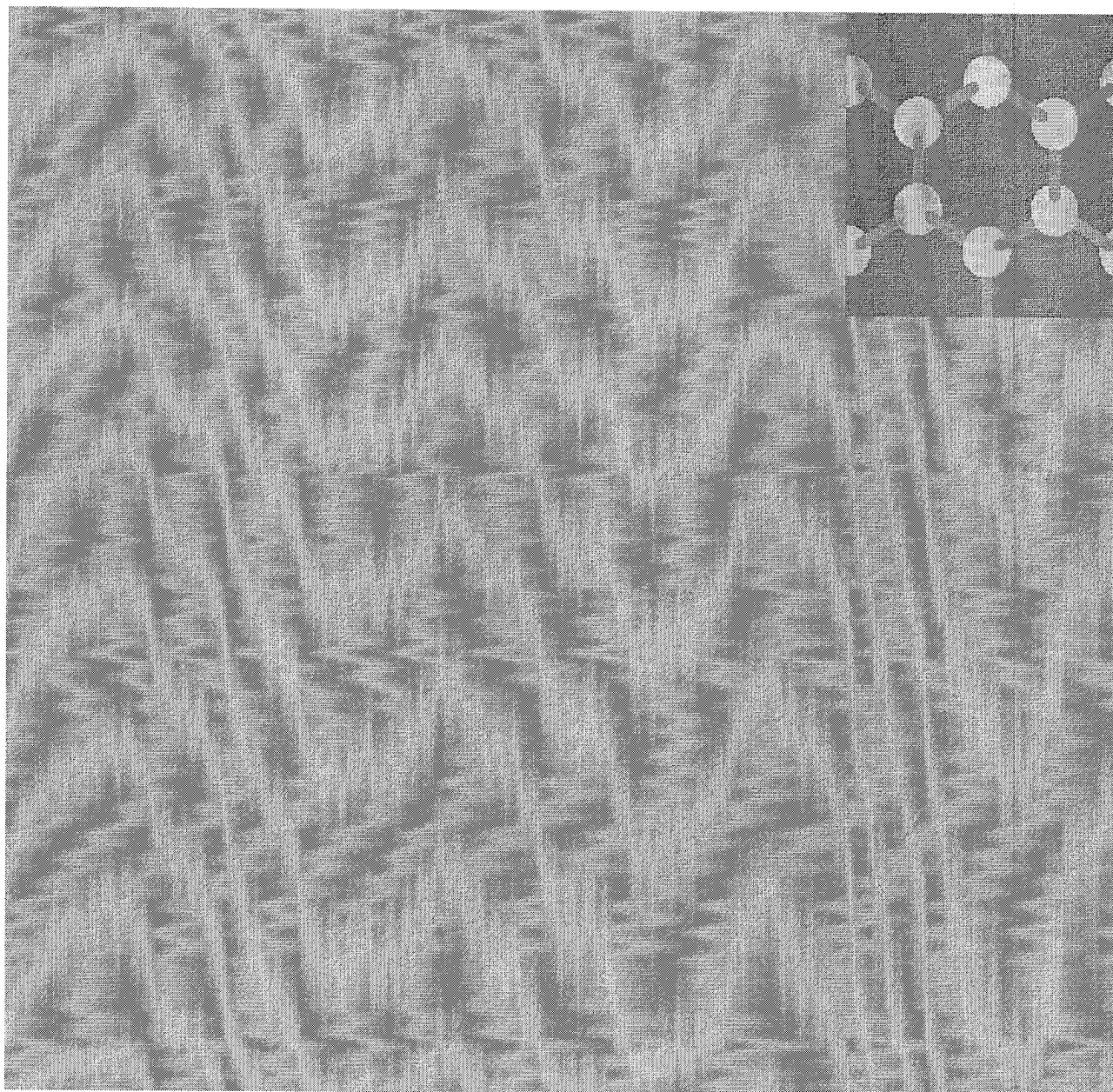
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**EPON™ and  
EPI-REZ™**  
Epoxy Resins



**Table 11 / Typical Properties of EPON™ Epoxy Polyacrylates**

Product	Chemical Type	Viscosity @ 25°C,cP	Equivalent Weight	Color <sup>1</sup>	Density lb./gal.	Comments
EPON 8021	Epoxy Polyacrylate	85 – 115	150	< 1	9.2	Very low viscosity epoxy diacrylate resin that imparts high reactivity and superior wetting characteristics. 13 minute gel time with TETA.
EPON 8111	Epoxy Polyacrylate	800 – 1100	140	< 1	9.5	Low viscosity epoxy triacrylate resin that provides rapid reaction rates. Uses include high-build sealers, wear-resistant surfacing and low temperature cure applications. 2.5 minute gel time with TETA.
EPON 8161	Epoxy Polyacrylate	1800 – 2400	177	< 1	9.6	Moderate viscosity epoxy diacrylate resin with performance similar to EPON 828. Applications include flooring, grouts, adhesives, casting and encapsulation systems. 27 minute gel time with TETA.

<sup>1</sup> Gardner Color Scale**Table 12 / Typical Properties of EPON™ Elastomer Modified Epoxy Resins**

Product	Chemical Type	Viscosity @ 25°C,P	Weight per Epoxide	Color <sup>1</sup>	Density lb./gal.	Comments
EPON 58005	CTBN Modified DGEBCA	3000-8000	325 – 375	< 9	9.0	CTBN modified BPA epoxy resin with an elastomer content of 40%. Utilized in high performance adhesives for peel strength, thermal shock resistance, toughness and fatigue resistance.
EPON 58006	CTBN Modified DGEBCA	1500-3000	330 – 360	< 9	8.9	CTBN modified BPA epoxy resin with an elastomer content of 40%, but a slightly lower acrylonitrile level than EPON 58005. For flexibility and fatigue resistance in adhesives and composites.
EPON 58034	CTBN Modified DGENPG	40 – 80	275 – 305	< 7	8.4	CTBN modified HELOXY 68 with an elastomer content of 50%. Provides a low viscosity and high toughness modifier for adhesives and sealants.
EPON 58042	CTBN Modified DGECHDM	150 – 300	325 – 375	< 6	8.5	CTBN modified HELOXY 107 with an elastomer content of 50%. Used as a modifier in many epoxy systems for adhesive and flexibility characteristics in adhesives and composites.
EPON 58120	CTBN Modified DGEBCA	50 – 200 <sup>2</sup>	850 – 1050	Straw	---	CTBN modified solid epoxy resin with an elastomer content of 20%. Straw color. Used for adhesion, thermal shock, fatigue and impact resistance in functional pipe and thick film powder coatings as well as for electrical powders.
EPON 58901	CTBN Modified DGEBCA	1000-5000	195 – 210	< 5	9.6	CTBN modified BPA epoxy resin with an elastomer content of 5%. Provides flexibility and tack for early green strength, and also provides flow control for adhesives, prepreps and sealants.

<sup>1</sup> Gardner Color Scale<sup>2</sup> @ 150 °C**Table 13 / Typical Properties of EPONEX™ Cycloaliphatic Resin**

Product	Chemical Type	Viscosity @ 25°C,cP	Weight per Epoxide	Color <sup>1</sup>	Density lb./gal.	Comments
EPONEX 1510	Hydrogenated DGEBCA	1800-2500	210-220	< 80	9.1	Low viscosity cycloaliphatic glycidyl ether. Used to obtain epoxy performance in coatings, electronics and specialty composites where UV resistance is a requirement.

<sup>1</sup> Platinum-Cobalt Color Scale